

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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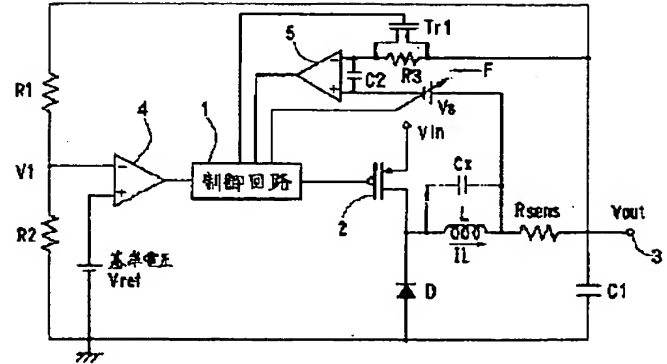
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APPLICANT : TOYOTA AUTOM LOOM WORKS LTD;

INVENTOR : TATEISHI TETSUO;

INT.CL. : H02M 3/155 G01R 19/165

TITLE : DC-TO-DC CONVERTER



ABSTRACT : PROBLEM TO BE SOLVED: To provide a DC-to-DC converter which does not obstruct the detecting function of a current detecting means, even when spike noises caused by the parasitic capacitance, etc., of an inductance circuit occurs at the switching of a MOS transistor.

SOLUTION: In order to prevent the occurrences of a case in which the current flowing through an inductor L and a resistor RSENS fluctuates due to spike noise caused by a parasitic capacitance Cx of the inductor and the like, and the output signal of a comparator 5 is inverted when a MOS transistor 2 is switched by means of a switching signal outputted from a control circuit 1, a filter F composed of a resistor R3 and a capacitor C2 is connected to the input section of the comparator 5, and at the same time, a transistor Tr1 is connected in parallel with the resistor R3. Therefore, the deterioration in responsiveness of the comparator 5 can be prevented by absorbing the spike noise by making the filter F to function by turning off the transistor Tr1, when the transistor 2 is switched, and in the mean time, the time constant of the filter F is reduced by turning on the transistor Tr1, when the transistor 2 is not switched.

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